

Notice of Allowability

Application No.

10/677,731

Examiner

Linh T. Nguyen

Applicant(s)

PAE ET AL.

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/02/06.
2. ☒ The allowed claim(s) is/are 1-6,8-18,20-24,26,27,29,30 and 32.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

WAYNE YOUNG
SUPERVISORY PATENT EXAMINER

DETAILED ACTION

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Greg Harper on December 7, 2006.

The application has been amended as follows:

In regarding claim 27, Greg Harper granted the office permission to change the claim as follow: 27. A method of compensating for focusing and tracking errors during reproduction and recording with a CD-DVD compatible optical pickup, comprising: receiving and monitoring light emitted from a first and a second light source onto an optical recording medium; detecting a focusing error using an astigmatic method; detecting a tracking error by one of the three-light beam method or a differential phase detection method; deforming first and second elastic members, each having one end coupled to a movable member having an objective lens and another end coupled to a holder, wherein the first elastic member is deformed a different amount than the second elastic member; and moving the movable member asymmetrically in a focusing direction due to the different deformations of the first and second elastic members, wherein a length of the first elastic member positioned nearer an inner circumference of

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the optical recording media is different than that of the second elastic member positioned nearer an outer circumference of the optical recording media.

In regarding claim 30, Greg Harper granted the office permission to change the claim as follow: 30. An actuator for a CD-DVD compatible optical pickup, comprising: an objective lens focusing light emitted from first and second light sources onto two types of optical recording media differing in thickness; a movable member, in which the objective lens is installed, moving the objective lens in a direction to compensate a focusing error signal and a tracking error signal, according to the difference in thickness of the optical recording media; and first and second elastic members, each having one end coupled to a holder and another end coupled to the movable member, the length of the elastic member positioned nearer an inner circumference of the optical recording media with respect to the radius direction of the optical recording medium being different from that of the elastic member positioned nearer an outer circumference of the optical recording medium such that the movable member is asymmetrically movable in a focusing direction.

Allowable Subject Matter

Claims 1-6, 8-18, 20-24, 26, 27, 29, 30, and 32 allowable over the prior art made of record with the Examiner Amendment, above. The following is an examiner's statement of reasons for allowance:

In regards to claim 1, none of the references of record alone or combination disclose or suggest a CD-DVD compatible optical pickup, comprising: an optical output

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module having a mount and first and second light sources, positioned adjacent to each other on the mount emitting light beams having different wavelengths; an objective lens focusing light emitted from the first and second light sources onto two types of optical recording media; an optical path conversion unit positioned on an optical path between the optical output module and the objective lens, converting a traveling path of incident light; a photodetector receiving the light beams emitted from the first and second light sources, reflected from the optical recording media, and passed through the optical path conversion unit, detecting a data signal and an error signal; and an actuator having a movable member in which the objective lens is installed, moving the objective lens in a direction to compensate a focusing error signal and a tracking error signal, the actuator rolling the movable member, in a case where recording and/or reproduction of data is performed, using a light beam deviated from a main axis of the objective lens among the light beams emitted from the first and second light sources, wherein the actuator includes: a base on which the optical output module, the optical path conversion unit, and the photodetector are installed; a holder installed on the base; a plurality of elastic members, each having one end coupled to the holder and another end coupled to the moving member such that the movable member is supported movably, the length of the elastic member positioned nearer an inner circumference of the optical recording media with respect to the radius direction of the optical recording medium being different from that of the elastic member positioned nearer an outer circumference of the optical recording medium such that the movable member asymmetrically moves in a focusing direction of the optical recording

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media; and a magnetic driving unit driving the movable member in the focusing direction and a tracking direction of the optical recording media by an electromagnetic force.”

Claims 14, 22, 27 and 30 have similar allowable subject matter, therefore are allowable.

Citation of Relevant Prior Art

Susuki et al discloses an optical pickup wherein the suspension wires are shifted to maintain center of gravity but still have all four wires with equal length.

Murakami et al discloses an optical pickup wherein the wires are different length on the same side of the actuator.

Kawano et al discloses an optical pickup actuator having a different length between the two suspension wires on the same side.

Hovanky discloses an actuator with suspension wires with same thickness and stiffness.

Suzuki et al discloses an actuator with suspension wires with different thickness.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linh T. Nguyen whose telephone number is 571-272-5513. The examiner can normally be reached on 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LN
December 7, 2006

WAYNE YOUNG
SUPERVISORY PATENT EXAMINER